**TASK**

**PERFORM CAVING LADDER OPERATIONS**

**CONDITIONS:** In a UH-60 helicopter with caving ladder equipment installed.

**STANDARDS:** Appropriate common standards plus these additions/modifications:

1. **Rated.**

   **a.** Conduct a thorough crew briefing.

   **b.** Maximum airspeed with caving ladder deployed is 60 KIAS with personnel attached to the ladder and 40 KIAS with no personnel attached.

   **c.** Maintain appropriate hover altitude ±5 feet.

   **d.** Do not allow drift to exceed ±5 feet from the intended hover point.

   **e.** Deploy light markers as required.

   **f.** Deploy caving ladder, extract survivor(s), and secure caving ladder equipment.

2. **Nonrated.**

   **a.** Ensure that the aircraft is configured for caving ladder operations.

   **b.** Advise the P* when the survivors are in sight.

   **c.** Inform the pilots when the ladder is being deployed/recovered.

   **d.** Direct the P* to a stabilized hover over the survivors.

**DESCRIPTION:**

1. **Crew actions.**

   **a.** The PC will conduct a thorough crew briefing and ensure all crewmembers are familiar with Caving Ladder Operations, emergency, and communication procedures. He will ensure the aircraft is rigged.

   **b.** The P* will remain focused primarily outside the aircraft throughout the maneuver for aircraft control and obstacle avoidance. He will announce the intended point of extraction and remain centered over the target with corrections from the P and NCM as required.

   **c.** The P and NCM will assist in clearing the aircraft and will provide adequate warning of obstacles. They will assist the P* during the pickup phase of the operation. They will advise the P* when the ladder is on the ground or in the water. If forward flight is required, the NCM must constantly monitor the survivor(s) and keep the P* informed of their stability.

2. **Procedures.** Caving ladder operations is a method used by SAR aircraft to retrieve downed crewmembers from the water when no watercraft are in the area or time constraints will not allow the aircrew to wait for such craft to arrive for the rescue operations.

**a.** The PC will ensure the ladder is inspected, serviceable, and secured to the aircraft. The NCM will inspect and secure a serviceable ladder to the aircraft cabin floor. Chemlights will be attached to the bottom of he ladder and ten feet from the bottom. Proper flotation will be attached to the ladder as necessary.

**b.** The PC will inform the NCM when to deploy the ladder and establish what maximum radar altimeter reading may be achieved with the ladder safely on the ground on in the water.

**c.** Once personnel in the water are located, plan the approach into the wind as much as possible. The approach should terminate to a hover approximately 20 feet above the personnel. The crewmember in the cabin area will lower the caving ladder when directed to do so by the PC. The crewmember will advise when the caving ladder has been deployed and that it is in the water. The ladder must touch the water prior to any personnel in the water touching it, to avoid electrical static discharge shock. Due to lack of visual references it will be difficult to detect drift over the water. Crewmembers must provide assistance to the P* in order to maintain a constant position over the personnel in the water.

**d.** Personnel to be extracted will grasp the ladder after it has entered the water and comes within reach. Personnel will then climb the ladder into the aircraft. Crewmembers will assist the entry into the aircraft as much as possible. In the event personnel are injured, and cannot climb into the aircraft; they will attach themselves to the ladder with a snap link attached to the front of the survival vest. These personnel will be flown to the nearest landing area, lowered to the ground and then moved into the aircraft.

**NIGHT OR NVG CONSIDERATIONS:**

**1.** For night operations attach one chemlight to the bottom of the ladder. This will aid the crewmembers in identifying when the ladder enters the water. Attach one more chemlight about 10 feet up from the bottom of the ladder so the person can still see the ladder when the bottom is in the water.

**2.** Spatial disorientation can be overwhelming during over water operations at night. Proper scanning techniques are necessary to avoid spatial disorientation. If there are visible lights on the horizon or if the shoreline can be seen the pilot may opt to approach the survivor(s) so the aircraft is pointed toward these references, if the wind permits. If no other references exist, deploy chemlights to assist in maintaining a stable hover.

**TRAINING AND EVALUATION REQUIREMENTS:**

1. **Training.** Training will be conducted in the aircraft.

2. **Evaluation.** Evaluation will be conducted in the aircraft.

**REFERENCES:** Appropriate common references.

TC 31-25 Caving Ladder Air Worthiness Release